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INTELLIGENCE LESSONS LEARNED
FROM THE
BATTLE FOR CRETE
MAY 1941

by

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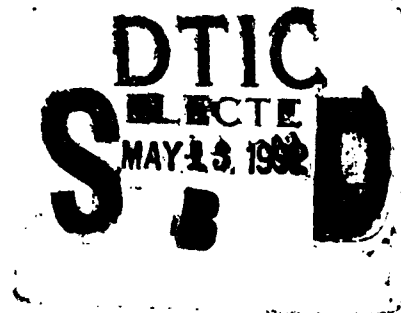
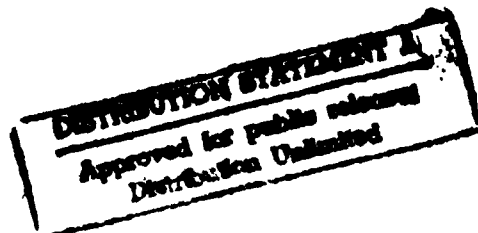
A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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INTELLIGENCE LESSONS LEARNED FROM THE BATTLE OF CRETE MAY 1941

CHAPTER I

INTRODUCTION

"At no moment in the war was our Intelligence so truly and precisely informed."¹ Thus British Prime Minister Winston Churchill described British intelligence warning of the German invasion of Crete in May 1941. Despite extraordinary information regarding German invasion plans, Crete was a loss for the Allies. The causes of the Allied loss and the course of the battle itself have been analyzed extensively. Review of the battle reveals that while intelligence provided invaluable warning to the Allies of the impending German attack, there were shortcomings in the Allied intelligence handling system at the operational level. This paper reviews the handling of the intelligence aspects of the attempt to defend Crete from the planning phases of the operation through the battle and presents some intelligence lessons-learned which may be valuable to modern operational planners. This paper concentrates on the operational level aspects of intelligence handling for the operation, rather than on the battle itself or on the production of the intelligence. While a brief summary of the battle itself is included for background information, the paper is not intended to analyze the battle itself, but rather those aspects of battle planning which affected the use of intelligence by the Allied forces.

CHAPTER II

THE BATTLE FOR CRETE

Background

Crete's Mediterranean location, 160 miles south of Athens, 200 miles north of Africa and 325 miles south of the Dardanelles Straits, defined its strategic importance for Britain and for her allies in early 1941. The British fleet in the Mediterranean was the Allies' first defense against Axis attacks on the oilfields in Iran, on the refineries in Haifa or on the Suez Canal, each of which was vital to sustainment of the British war effort.¹ The naval base at Suda Bay, on Crete's northern coast, provided an ideal point for British ships protecting these facilities to base or to refuel. From a different perspective, the airfields located on Crete's northeastern coast at Maleme, Retimo and Heraklion, enabled whoever controlled the island to threaten a large part of the eastern Mediterranean. This was particularly important to the Germans planning to invade the Soviet Union. Having secured the airfields in Greece, if the Germans could also capture and use those on Crete, they could dispose of any threat to the flank of the forces invading the Soviet Union.²

Despite these important strategic considerations, little was done prior to April 1941 to protect Crete or to plan for its defense. Churchill recognized Crete's strategic significance and wanted it made into a "second Scapa."³ He noted that "if our base at Crete was well defended against air attack the whole process of superior sea power would come into play and ward off any sea-borne expedition."⁴ He also realized how seriously overextended and under-resourced General Wavell's Middle East Forces were in early 1941 and observed that as long as Greece remained under Allied control, there

would be no major defense of or build-up on Crete.⁵ Crete was not seen as a likely site for front-line hostilities and in the allocation of scarce military resources, Crete was a very low priority.⁶

In late 1940, British policy was to maintain one British garrison and one Greek brigade on Crete, but to build up a base able to accommodate a full division.⁷ The Mobile Naval Base Defense Organization (MNBDO) was ordered to Crete in January 1941 with orders to build the refueling base at Suda Bay into a true fleet base, but only one fourth of the planned 8000-member MNBDO force had arrived on Crete before the German invasion. At the time of the April 1941 fall of Greece to the Germans, there were two heavy anti-air batteries, three light anti-air batteries, and one searchlight battery on Crete, with approximately one third of the inventory of heavy guns, light guns and searchlights determined by the Chief of Staff as essential for island defense.⁸

Following the evacuation of Greece, the British began to accelerate their planning for the defense of Crete. Their plans were spurred by receipt of extremely good intelligence which revealed plans for an airborne and/or seaborne invasion of Crete within weeks.⁹ Contents of these intelligence reports and their application will be detailed in a later chapter. Recognizing Crete's increased strategic importance in light of Greece's fall to the Germans, the War Council decided to defend Crete rather than to evacuate the island and to permit it to default to Axis control. Forces already resident on Crete were augmented by those evacuated from Greece, and General Bernard Freyberg, a World War I hero from New Zealand, was appointed Commander of British and Imperial Forces in Crete at Churchill's request.¹⁰ On the day of the German invasion, his command included approximately 28,600 British, Australian and New Zealander troops as well

as over 10,000 Greek soldiers and gendarmes.^{11,12} These figures are very deceiving, however, as these forces were poorly equipped. Many of the Greek troops had no weapons, and those who did were armed only with rifles and an average of less than 30 rounds per man.¹³ The greatest proportion of the British and Australian forces had been evacuated from Greece. Though these men were organized in fighting units, their heavy arms and most of their equipment had been destroyed or abandoned in the evacuation, and they were not reequipped when they got to Crete.¹⁴ Air defenses were virtually nonexistent, and, though requested, fighter aircraft protection was not available.¹⁵ General Freyberg was provided no staff to support him and was forced to build one from the collection of personnel already on the island.¹⁶ No trained intelligence officers were available for the staff nor had intelligence preparation to defend Crete begun.^{17,18} Radio and communications equipment was insufficient to establish communications between each level of command and its superior level.

General Freyberg recognized that the forces deployed on Crete were inadequate to face the predicted attack. He sent a message to Wavell in Cairo identifying deficiencies in equipment, artillery and ammunition, and requesting Air Force and Navy support to defend Crete. He recommended that if additional resources could not be made available, that the decision to hold Crete be reconsidered.¹⁹ Wavell relayed Freyberg's message along with his own concerns on the subject to the Commander of the Imperial General Staff, but under pressure from Churchill who felt that Crete must be held for political reasons, Wavell received instructions to "hold Crete at all costs."²⁰ Freyberg proceeded with his preparations to defend Crete from the predicted airborne and seaborne assault.

German Plans

The German invasion of Crete was designed to eliminate a threat to the Ploesti oilfields from Royal Air Force bombers based in Crete and to contribute to ongoing German plans to protect forces involved in OPERATION BARBAROSA.²¹ The aim of the operation was to occupy Crete so it could be used as a German air base against Britain in the eastern Mediterranean. The plan called for an airborne assault on the airfields at Maleme, Retimo and Heraklion by a combination of paratroops dropped from transport aircraft and "super-elite" storm troops who would be delivered to their landing points in gliders. The glider troops, armed with rifles, machine guns, grenades and mortars, were to land in open fields or on broad roads, enabling them to descend silently into the enemy's midst and to quickly engage in combat. Each airborne paratroop was to carry only a machine pistol and several grenades. After landing and breaking free from their drop harnesses, they were to regroup and equip themselves with rifles, machine-guns, mortars, grenades, light field guns and ammunition from canisters which were also to be air-dropped. Estimates of the armament to be dropped in the assault placed German firepower at approximately double that of the Allied defenders, provided the German troops could reach their supply and arms canisters before the Allies reached the paratroops.²²

With relatively lightly armed troops dropped into enemy territory, the key to German success was their ability to capture an operational airfield to be used for follow-on troop delivery and resupply. The Germans considered the airfield at Maleme their center of gravity, and it became the focal point of the invasion.²³ Two sorties were planned for the first day of the invasion. The first was to be conducted against the Maleme airfield at 0815; the second would drop parachutists on the airfields at Retimo and Heraklion

at approximately 1600.²⁴ The Germans planned for approximately 750 glider troops, 10,000 paratroops and 5000 airlanding troops to participate in the assault.²⁵

The Germans also planned a naval expedition, but it was intended as a back-up delivery mechanism for reinforcements in the event the airfields could not be captured or were damaged too extensively to be used for reinforcement delivery. One flotilla was to reach the coast near Maleme on the afternoon of the first day of the invasion, with other seaborne troops heading for Heraklion on the second day. Each flotilla was to transport one infantry battalion, heavy weapons and supplies. Apparently little planning went into the seaborne invasion.²⁶

The Battle

The invasion came from the air. At 0745 on 20 May 1941, German aircraft conducted what had become their daily bombardment of the Canea/Maleme/Suda area. On that day, however, Allied defenders of the island noted that the bombardment was heavier than usual, and at 0800, the first gliders were observed.²⁷ Within minutes, all sixty of the gliders used for the operation had landed in the Maleme airfield vicinity. The parachutists arrived immediately following the glider troops. Forewarned of the impending airborne assault, the defending forces were ready and waiting for the German invasion. The descending gliders were extremely fragile, and the lightly armed and virtually unprotected parachutists were highly vulnerable during their landings and in the period immediately following landing. This was the time at which the Allies needed to inflict great damage on the Germans, as they would be outgunned if the Germans survived the landing, regrouped and equipped themselves from their caches of heavier arms. German vulnerability during

the landing was exacerbated by faulty German intelligence and reconnaissance reports which indicated that Crete was sparsely populated and lightly defended.²⁸ While the Germans planned to use surprise to their advantage with a massive and unprecedented airborne assault, the defenders actually possessed a greater element of surprise by being positioned to meet the invading troops.

The attacking Germans, unprepared for opposition from the defenders, sustained heavy losses in the periods immediately following the paratroops. While the transporting aircraft themselves sustained few losses and returned to German headquarters with reports of the operation proceeding according to the plan, the troops on the ground were far less successful than had been anticipated. By 1500, only one significant inroad had been made in the multi-pronged attack on Maleme, while the remaining German paratroops were enroute the 1600 assaults on the airfields at Retimo and Heraklion.²⁹

At Maleme, the 21st and 23rd New Zealand Battalions suffered relatively few casualties and had been able to hold their ground. Only the 22nd New Zealand Battalion, under the command of Lieutenant Colonel Andrew, was in serious difficulty. Communications were severed between Andrew and at least two of his four companies, and also from the battalion to the brigade headquarters. Neither Andrew nor his superiors had an accurate picture of the complete course of the battle at Maleme.³⁰ While the 22nd Bn desperately needed reinforcement and support, the 21st and 23rd Bns spent much of the day inactive.³¹ Having received no reinforcement by nightfall, Andrew withdrew the forces fighting to maintain control of the airfield to a more secure position. This action ultimately provided the Germans an opportunity to seize the initiative and to gain control of the operational airfield at Maleme.³²

On 21 May, the Germans advantageously used the Allied withdrawal from Maleme by attempting to fly their airlanding reserve into the Maleme airfield. Approximately 40 transport aircraft landed at Maleme with about 650 men of the 100th Mountain Rifle Regiment.³³ The successful delivery both provided the Germans with reinforcements they urgently needed and secured German control of the airstrip. Despite a counterattack by the Allies on 22 May, the Germans continued to direct supply and troop laden aircraft into Maleme. The Allies never regained control of the area. Despite resistance to the 20 May assaults on Retimo and Heraklion, and several efforts to mount counterattacks in the Maleme/Canea region, Freyberg became convinced by 26 May that the loss of Crete was inevitable. On the 27th, Wavell decided to evacuate the island before German air dominance made that impossible.³⁴ Crete was captured by the Germans.

CHAPTER III

THE ROLE OF INTELLIGENCE

Given the qualitative disparity between Hitler's elite paratroops and the poorly equipped Allied troops defending Crete, the battle should have been an overwhelming victory for the Germans. It was not. Although a tactical victory for the Germans, the margin of victory was quite narrow. Had the Allied forces been better able to communicate among themselves, the victory could well have been theirs. The foreknowledge of German plans for the assault on Crete gave them a powerful advantage to use in the island's defense. It was nearly decisive.

Ultra was the covername given to information derived from decryption of German message traffic which had been enciphered using the ENIGMA machine. ENIGMA was used on most communications nets serving high level German military headquarters of all services as well as many government agencies. The encryption process was complicated, with machine settings changed frequently and with cryptovariables changed for each message.¹ The source was extremely sensitive and very carefully protected. Dissemination to commanders was sparing and cumbersome. Furthermore, field commanders were severely restricted in their use of Ultra information within their staffs or in tactical operations. All codebreaking of ENIGMA enciphered traffic was performed in Hut 6 of the Government Code and Cipher School (GC&CS) at Bletchley Park in London. Once decrypted but still in the original German language, intercepted message traffic was forwarded to other areas for translation and analysis. Naval material was passed to the Admiralty's intelligence service in London for translation, analysis and dissemination. Army and Air Force material was worked by translators in Hut 3 at GC&CS.

The translations were screened by the head translator for military or intelligence value; then passed to air or military advisors who conducted further analysis and determined whether and to whom the data would be further disseminated. Reports were then drafted and passed to communicators for encryption and transmission to political entities in London and, in fewer instances, to the commander in the field.² The process was producer-driven rather than user-driven. A field commander received only that information which the Ultra producers considered necessary and appropriate for that commander to receive. There was no way for a commander to stipulate what types of information he required to conduct his mission.

As German planning for the invasion developed in April 1941, information regarding the threat to Crete gradually emerged through Ultra. German planning was being conducted quickly, ENIGMA enciphered radio communications were voluminous and inexperienced Luftwaffe communications operators provided the GC&CS cryptanalysts with the multitude of operator errors needed to "break into" and to exploit the encryption system.³

By mid to late April, Ultra provided indications of German planning for a new assault; although, both the means and the location were initially ambiguous. Initial indications of impending German action included intercepts revealing that German transport aircraft were flying to Rumania and South Bulgaria to be used by the XI Air Corps (the paratroops), that the 22nd Air Landing Division (the glider troops) was preparing to move to Yugoslavia for an unknown mission, and that a German general who was known to be associated with airborne operations was interested in reconnaissance of an unspecified area.⁴ None of these intercepts identified Crete as the objective; however, it was among the possibilities and the specter of airborne operations was certainly raised.

The ambiguity vanished between 24 and 27 April with receipt of Ultra reports that air reconnaissance of Crete was being delivered to the VIII and XI Air Corps and to the general mentioned above. Other Ultra reports during the same period revealed Luftwaffe High Command's plan to ready large fuel supplies for the XI Air Corps; preparations for an attack on Crete using bombers, fighters and transport aircraft; plans to move the 22nd Air Landing Division and the Seventh Fleigerdivision parachute troops to Athens; arrival of 51 transport aircraft in Bulgaria; and delivery of photographs and of maps of Crete to the VIII Air Corps.⁵ Crete was clearly the German's objective.

Receipt of this information led London officials to decide to provide Ultra information to General Freyberg on 28 April. Security procedures under which the information was provided were complicated and he was prohibited from sharing the source and many details of the information with his subordinates.⁶

On 30 April, Ultra reported German orders that Suda Bay was to remain unmined and that the airfields on Crete were not to be bombed to prevent interference with the impending operation.⁷ Intercept of these orders provided the indication that an amphibious operation was possible as well as an airborne operation. Ultra reported comprehensive details of the German assault plan on 6 May. Both Wavell and Freyberg received this report which revealed that German preparations would be complete by 17 May and reported the assault plan to be the following:

First would come parachute landings by the 7th Fleigerdivision and the corps troops of Fleigerkorps XI to seize Maleme, Candia (Heraklion) and Retimo airfields, whereupon dive bombers and fighters would occupy the two first named. Next would come an air landing to deliver the remainder of Fleigerkorps XI and its headquarters, which was to control the operation. Following this, Flak, three mountain regiments from the Twelfth army in the Balkans, armored and antitank units,

motorcyclists and supplies would come by sea. The German Admiral Southeast would provide protection of the seaborne contingent with Italian and German vessels. The operation would be preceded by a sharp air attack on RAF bases, army camps and antiaircraft positions.

While this report raised the prospect of both airborne and sea-based assaults, it made clear that the air assault was the focus of the operation.

On 7 May, the Director of Intelligence at the British Air Ministry produced and forwarded to Freyberg an estimate of the anticipated assault. The estimate predicted an air attack the day before or the day of the assault, air landing of troops and light tanks on the first day or two of the assault, and seaborne delivery on the second day. The estimate identified 450 troop carrying aircraft with a caveat that the figure could increase to 600. About 12000 parachutists were expected in two sorties on the first day of the assault, with 4000 men and 400 tons of supplies predicted for delivery on the second day. Aircraft for a maximum of 150 bomber and 100 fighter sorties in one day were estimated to be available.⁹

On 13 or 14 May, both Wavell and Freyberg received a report which combined the information provided on 6/7 May with some new details. This report did not differentiate actual decrypted signals from derivative intelligence analysis and comment on the actual decrypts. This was contrary to the practices generally used at the time and it remained uncertain whether the force predictions for the assault were German plans or British projections based on analysis of collected signals.¹⁰ This report estimated German force strength for the operation to be between 30000 and 35000, approximately evenly divided between parachute, glider and seaborne units.¹¹ A 16 May Ultra report postponed the operation while another Ultra report on 19 May predicted that the invasion would occur on 20 May.¹²

The intelligence available to Freyberg clearly pointed to an assault on the airfields of Crete by German paratroops, with seaborne landings a likely follow-up operation. While German paratroops had twice seized lightly defended airfields in Norway and in Belgium, never previously had an island been captured other than by invasion from the sea.¹³ This posed a serious dilemma for Freyberg. Was he to defend against the historically unprecedented airborne assault which intelligence that he did not fully understand and could not discuss with his staff predicted, or was he to defend against the more historically likely seaborne assault with the addition of an airborne element? Freyberg chose the latter. He divided the forces in the Maleme area in an effort to defend both the airfield and the long coastline from Platanias to Maleme.¹⁴ Forces were not concentrated at the airfield, the objective of the enemy attack. A good portion of the New Zealand Brigade was devoted to the secondary effort of defending the coastline, an uneconomical use of the available forces. Ultra provided a distinct, though not entirely unambiguous, picture of the impending invasion. General Freyberg chose to accept Ultra's warning of an airborne assault while maintaining an emphasis on defense against an attack from the sea.

Ultra production continued throughout the battle; however, the information was generally of less value to Freyberg than had been that produced prior to 20 May. Since the German headquarters communicated by radio both with the takeoff fields for the aircraft involved in the assault and with the returning transport crews, signals for intercept and analysis were plentiful. On 21/22 May, Freyberg received confirmation from Ultra that Maleme was both the principal objective of the operation and an intended resupply point.¹⁵ Of less value to Freyberg were Ultra reports derived from radio reports from pilots of returning aircraft. These tended to overstate

the degree of German success and added to the confusion for Freyberg, who was essentially out of communication with his own frontline troops and who could neither confirm nor refute the German reports.¹⁶

While Ultra provided a remarkable volume of extremely valuable and accurate intelligence regarding plans for the invasion, it could not provide all of the information Freyberg needed at the times that he needed it. One crucial piece of information not contained in the Ultra reports was the total size of Hitler's parachute forces.¹⁷ The entire German parachute force was used in the first day of the assault on Crete. No reserve was retained.¹⁸ Had Freyberg known that the German's had no reserve, the importance of an operational airfield might have been more apparent to him. Freyberg lacked this information and had no mechanism by which to ask if it was available or to request that intelligence collection resources look to find it. He could not task the intelligence system.

Freyberg also lacked an organized system to collect and to disseminate "tactical" intelligence during the battle. Most of the combat elements had some organic reconnaissance capability, but these worked independently and had neither orders nor communications capability to be organized into anything resembling a coordinated force intelligence collection function.¹⁹

CHAPTER IV

LESSONS LEARNED

Intelligence alone probably could not have prevented the German victory in Crete nor did intelligence alone lose the battle for the Allies. Intelligence made a significant difference and likely prevented the loss of many Allied lives. Yet, there were deficiencies in the links between intelligence and operations for the battle and there are important lessons to be extracted. Five intelligence-related lessons drawn from the battle for Crete are the importance of intelligence availability throughout the battle, the importance of communications to the use of intelligence, the need for the commander to understand his intelligence if he is to use it productively, the problems associated with source protection and the inevitability of ambiguity in intelligence. Each of these issues reduced intelligence effectiveness on Crete in 1941, and each has significant ramifications today.

Lesson 1: Commanders must plan to provide for intelligence availability throughout an operation. Ultra was most valuable prior to the battle when it revealed the details of enemy plans and intentions. Derived as it was from decryption of high-level German message traffic, it was of far less value to Freyberg during the battle. Once the troop transport aircraft released their paratroops on the morning of 20 May, the information Freyberg most needed was that which would have come from communications of the troops who had landed and were actually assaulting Maleme; not the estimates of success of the aircrew which had dropped troops but which was not involved in the battle. Ultra could not provide this information and Freyberg had

no working alternative intelligence source. The parachutists on the ground were not communicating on ENIGMA-covered nets. Even if they had been, it is highly unlikely that GC&CS cryptanalysts could have intercepted, deciphered, analyzed and reported the information sufficiently promptly for it to have reached Freyberg in time to affect the battle. During later phases of the war, special radio intercept units, called "Y units," deployed to the field to intercept and exploit low grade cryptographic systems, but there was no such unit on Crete.¹

Freyberg needed a combination of field intelligence collection/cryptanalytic capability and an organized system of battlefield reconnaissance. The field decryption capability, such as a "Y" unit, would have provided Freyberg with continuing information regarding intentions of enemy forces on Crete. A combination of a "Y" unit and improved battlefield reconnaissance could have provided him with information regarding what had just happened and how the enemy was disposed to act. He had neither; thus, he had no method by which to assess the threats to his forces as the battle progressed.

The commander needs different types of information at varying phases of the operation. Different sources of intelligence provide different types of information. If the commander is to have the right information at the right time, he and his staff must determine what information they will need at each phase of an operation and develop a system by which they can integrate information that can be collected by the operating units with that information which must be delivered from outside sources. Freyberg did not do this. Admittedly, Ultra was a new game and Freyberg was merely a fortunate beneficiary of the valuable intelligence it provided. The system which produced Ultra was producer-driven rather than consumer-driven. Freyberg

lacked control over his receipt of Ultra. He did have control over the requirements for his forces to provide battlefield reconnaissance, and there is no indication that he foresaw this requirement or attempted to integrate it into his plan to defend Crete. Each unit had some reconnaissance capability, but there was no advance planning to bring frontline collection, what would today be data from organic sensors, back to the higher headquarters for use in dynamic battle management. Knowledge of what the 21st, 22nd and 23rd Battalions faced individually and collectively at Maleme on 20 May could have led to alternative disposition of Allied forces, and possibly held the airfield.

Lesson 2: Intelligence without communications support is of minimal value. It has been said that Crete could have been saved had there been 100 extra wireless radio sets.² The shortage of communications equipment virtually severed Freyberg from his troops during the battle, causing him effectively to lose control of the units under his command.³ This critical command and control deficiency affected the intelligence support system. Freyberg lacked any sort of intelligence support once the fighting began. This was primarily the result of inadequate advance planning and of a lack of an organization to define and support tactical intelligence requirements. However, had these structures been established, they would have been defeated by Freyberg's virtual inability to communicate with his subordinate commanders and by the field forces' inability to communicate with one another.

There were separate battles occurring at each of the three airfields, the naval battle was in progress off the Canea coastline, and there were three concurrent battles at Maleme. Each was conducted in an intelligence vacuum. Two of the three airfields had been secured and the Navy successfully

maintained coastal security, yet Freyberg had no way to know these facts as they developed.⁴ Though he recognized Maleme to be a danger point, Freyberg had no way of acquiring a dynamic intelligence picture of the situation at the airfield; thus, he had no information to use in deciding how to redeploy his forces to remedy the situation.

Accurate current intelligence is critical to command and control. Information regarding enemy progress and status of both sets of troops was available at the scene of each conflict, yet there were neither established communications systems nor sufficient supporting equipment to pass current intelligence from the scene of battle to the higher level commander to enable him to shift assets, to redeploy troops, or to call for naval gunfire support. At each level above the company, commanders operated blindly. Intelligence information existed, but could not be conveyed; thus, the information was of no value to the commanders for battle decisions.

Lesson 3: If intelligence is to be of value the commander must understand his intelligence system and have sufficient confidence in it to use it effectively, but he cannot be his own intelligence officer. Intelligence's greatest value at the operational level is to help the commander to answer the question "what's it all about" with regard to his enemy's capabilities and intentions.⁵ Properly used, intelligence should paint a picture of the opponent which the commander must defeat if he is to achieve his mission. This is more than simply accounting for enemy troop dispositions and for his weapons and hardware capabilities. It also involves a glimpse at enemy intentions. In essence, it means determining what the enemy commander sees his mission to be. This is an extremely difficult, and sometimes impossible task which cannot realistically be performed by the commander alone. The

commander needs an intelligence staff which he trusts and which is properly structured to help him to interpret information about the enemy in the context both of the sources of the information and of the impending or ongoing operations. The commander, through his intelligence staff, needs to understand how the intelligence has been collected and evaluated if he is to be able to attach any level of confidence to it. The confidence factor will directly affect how the commander chooses to use or not to use intelligence provided to him.

General Freyberg faced several problems in understanding the available intelligence. When assigned to command the forces on Crete, there were no intelligence officers assigned to his staff and he was forced to use non-intelligence personnel as his intelligence officers.⁶ While subordinate units often had an intelligence officer incorporated into them, Freyberg's staff, which was supposed to aid him in supporting, coordinating and directing all units assigned to defend Crete, had no intelligence officer assigned. Additionally, when working with Ultra, Freyberg received little, if any, support in understanding the information's origin or its reliability. There is some question as to whether Freyberg actually knew that the intelligence he received regarding German invasion plans came from intercepted message traffic. Many sources indicate that Freyberg was passed Ultra disguised as HUMINT from a German agent.⁷ Bennett, however, indicates that Freyberg learned of the actual source stating "Ultra was being sent to him personally and exclusively, and he was forbidden to show it to anyone or to discuss it with his intelligence staff."⁸

Either situation is bad. If Freyberg believed his intelligence to be the product of agent reports, he would possibly attach different validity to it than if he knew it to be the product of intercepted message traffic

which the Germans believed to be secure. This could bias his assessment of the information and affect how he used it. If Freyberg knew that the information was derived from message traffice, but knew nothing else about the users of the circuits that had been intercepted, knew nothing about German confidence in the security of their ENIGMA-covered nets and was prohibited from consulting his staff to help him to merge the Ultra intelligence with knowledge his staff might have had about the enemy, his ability to use the intelligence was severely reduced. Freyberg's assessment of the situation his forces faced in defending Crete was lacking the key input an intelligence staff should provide.

This affected the way in which he used his forces. For Freyberg, the key question was whether the assault would come from the air or from the sea. Though Ultra reported German plans for both types of operations, it subordinated the sea-based invasion to the air assault.⁹ In analyzing enemy capabilities and potential courses of action, Freyberg remained fixed on the historical lack of precedent for an airborne assault, and did not draw the best conclusions from the available information. Not only did he direct that forces at Maleme be positioned so as to be able to meet invasions from both sea and air, but he also did not glean from the reports the importance of the airfields. Not knowing the full strength of the German paratroops and failing to recognize that they needed an operational airfield for troop resupply and reinforcement, Freyberg neither fully concentrated his troops at Maleme nor did he permit the airfield to be destroyed. Instead, his actions left the airfield intact and not fully defended, paving the way for the Germans to exploit the situation.

One could argue that Freyberg's decision to defend against both air and sea assaults was prudence rather than a less than optimal choice. In

another situation, this may be a valid statement, but for Crete, Ultra provided as close to perfect intelligence as will ever exist. If he understood that he held enemy plans, received over a circuit which the enemy trusted to be secure, it is hard to justify his choice.

As Lewin described it, Freyberg "got the message, but not the meaning" of the Ultra intelligence passed to him.¹⁰ He got the details of the intelligence but not the big picture. The details alone denied the Germans the much-needed element of surprise and permitted Allied forces to be in position to inflict major casualties on the invaders. Details plus a better understanding of the aim of the German assault would probably have permitted both more effective concentration of Allied combat power at Maleme and greater economy of force employment by reducing the effort expended to defend against the anticipated sea-launched invasion. These actions might have enabled Allied forces to have gained the initiative and to have retained control of Crete. There is no guarantee that a knowledgeable commander with the best intelligence staff will always make the choice which best withstands the scrutiny of hindsight, but with neither a staff nor personal knowledge, Freyberg's decision making was severely hampered.

Lesson 4: There is a trade-off between effective use of intelligence and protection of sources. While many aspects of this balance may be outside the commander's control, he must identify the related issues and have clear guidelines for dealing with source protection matters.

The Ultra source was extremely sensitive. Believing that their ENIGMA-covered radio nets were secure, the Germans used the same communications procedures with the same encryption system to pass high level traffic related to virtually all aspects of the war.¹¹ Although the Germans

knew that their encrypted radio nets were being copied by the Allies and that the Allies attempted to decipher the traffic so intercepted, they trusted that ENIGMA was unbreakable.¹² Had they ever lost confidence in the security of their cryptography and/or had they ever found a way to equip their units with landline communications, radio intercept would have been denied to the British and Ultra would have been a lost source of intelligence. For the GC&CS cryptanalysts, the keys to success and to continued production of Ultra intelligence were for the Germans to remain confident in the security of ENIGMA, for them to have no reason to significantly alter their communications operating procedures (e.g., mode of communication, radio net structures, protocols, message formats and patterns, etc.), and for them to have no reason to significantly alter the functioning of the ENIGMA machine. Retention of these conditions required excruciating source protection measures.

Source protection requirements imposed two restrictions on operational use of Ultra. First, the greater the number of people who knew of the source and the greater their level of knowledge about the source, the greater the possibility of it being compromised. Thus, Ultra dissemination was extremely restricted. Secondly, and of greater operational significance, if a piece of information could be derived only from Ultra, action based on that information would likely compromise the source.

Both of these considerations adversely affected Freyberg's ability to use Ultra intelligence. As noted previously, he was prohibited from discussing the Ultra material with his staff, impeding his ability to analyze the situation and to plan for the operation. Additionally, he was instructed by Wavell not to use Ultra tactically without corroborating intelligence from another source.¹³ This requirement came from Churchill who considered the Ultra source so vital and so productive to the overall course of the

war that he deemed it better to lose a battle than to lose the source.¹⁴

Unfortunately there was no way to corroborate most of the planning information Ultra provided and Freyberg's actions were restricted.

The operational commander will rarely be the one to decide the extent to which special source information may be shared or acted upon. This is particularly true when the information is derived from national sources. This does not imply that the commander has no input in the use of such sources. His intelligence staff can build plans to work with the controlling authorities of these sources both to develop plausible cover or denial schemes and to establish guidelines for dissemination and distribution of sanitized products at the tactical level.

Lesson 5: Intelligence never paints a completely unambiguous picture. When members of one's own force communicate, there are varying evaluations of the facts of a situation. There is ambiguity even when one controls the information being disseminated. These problems are compounded in the intelligence process in which one gathers and evaluates information about an opponent. The intelligence system collects both what an opponent makes known about himself and what he seeks to hide. The collector and the analyst have no control over the information. They do not know absolutely if they have real information or if it is information which has been planted to deceive them. They do not know if they have received all of the facts and they cannot go back to the source to ask for retransmission. They cannot ask for clarification or resolution of conflicting information. There will always be pieces missing from the intelligence puzzle. Intelligence is a continuous process of estimation, rather than a formula which leads to a definitive and irrefutable conclusion--and the commander must realize this.

The intelligence picture available to General Freyberg prior to 20 May was remarkably clear. He knew how, when and where the Germans were going to invade. Nonetheless, significant details were absent. Troop strengths were estimated, existence or lack of paratroop reserve was unknown and uncertainty regarding air versus sea basing for the assault remained in Freyberg's mind until the battle began. Freyberg formulated his operational plan on his opinion of the most likely course of German action. A good estimate of enemy capabilities and a most likely course of enemy action is the best that intelligence can provide. It is vital that a commander recognize that and not expect more. Many commanders expect or request perfect intelligence. This condition cannot be achieved. The commander should include intelligence as part of his analysis of an operation. He cannot expect to substitute intelligence for his analysis.

CHAPTER V

CURRENT CONSIDERATIONS AND CONCLUSIONS

Both operations and intelligence have grown vastly more complicated since the Battle for Crete. Weaponry advances, computers, satellites, sophisticated communications and the proliferation of intelligence sensors have made the battlefield simultaneously larger and smaller for the commander. Nonetheless, each of the intelligence lessons learned from the Battle of Crete has implications for commanders and for intelligence planners today.

Intelligence Availability

General Freyberg had no organized system for intelligence requirements definition, collection, analysis and dissemination. He had no method by which to combine information derived from sources outside his forces with information that might be collected by his forces. The Ultra dissemination system was producer-driven; not consumer-driven. Intelligence in today's operational world must be consumer-driven and it must be tailored at the operational level to meet the demands of the mission. To ensure that he gets the best intelligence the system can provide, the commander should fully incorporate his intelligence staff into operational planning from contingency identification. Additionally, the intelligence architecture for each operation should integrate information from sources internal and external to the operating force.

It is vital that the intelligence staff be fully incorporated into operational planning as soon as a contingency is identified. The intelligence staff needs to understand both what is being planned and the underlying aim if it is to be able to define the specific types of information that are

needed to provide the commander with as complete a picture as sources and methods permit throughout the operation. Today's intelligence requirements definition and validation process can be a lengthy one. Much of the information that the staff needs for the early stages of operational planning is derived from sources outside the operational force, while information required during the operation may come from a combination of internal and external systems. The sooner the intelligence staff knows of a contingency requirement and the better its understanding of the target in the context of the commander's objectives, the better able it will be both to advise the commander on potential courses of action and to provide robust intelligence throughout the operation.

In ensuring intelligence availability during all phases of an operation, the intelligence staff will need to build an intelligence framework which integrates information from national-level and theater-level intelligence producers with intelligence available from force assets. Additionally, portable intelligence collection and analysis packages are becoming increasingly capable, and there has been an explosion of field deployable systems which may be available for deployment during an operation if the need is anticipated and planned. These deployable capabilities include portable computers with technical databases not normally retained by an operating force, portable intelligence communications exchange systems which make the link to national systems a direct one, special purpose equipment to perform a variety of intelligence-related tasks and specially trained crews from installations ashore whose skills can augment those resident in deployed forces. These assets are available, but the intelligence staff must identify the requirement for them in advance if they are to be successfully integrated during the operation.

Finally, in defining intelligence requirements, the commander is well-served to ask for "the impossible." Too often, operational intelligence requirements are based on what the commander and his staff believe the intelligence system can provide, rather than on what they truly need. In planning for intelligence support, the operators should identify the type of information they believe they need without regard for perceived intelligence system capabilities. The intelligence system has no choice but to respond with what it can provide at the time, and that may fall well short of what is requested. New requirements identified by the commander will be examined and may lead to future capabilities. If the commander does not request the impossible from the operational level, then the capability will likely never exist at the tactical level.

Communications

The British might have held Crete had they had additional wireless radio sets. Despite the explosion in communications technology, the modern world still lacks sufficient communications capacity to meet requirements. This is no less true in the intelligence arena. If intelligence is to be of value to the operator, it must be delivered where he needs it when he needs it. Intelligence collection and analysis systems have grown to do amazing things, but the "pipe" through which the intelligence must flow from the collection and processing point to the operational user is often not sufficiently large to handle the data fed into it. A collection and processing system which can output data at 2400 or 4800 baud but which is constrained by a 75 baud circuit connection to a user is of reduced value to him. The ultimate solution to this problem is beyond the realm of the operational commander. It lies in adherence to a policy that systems designed to support deployed

forces not be built and fielded until and unless the supporting communications systems are in place. In the shorter term, communications support to intelligence can be optimized by integrating intelligence and communications planning, by mission tailoring requests for intelligence which must be transmitted across heavily burdened communications systems, by dynamically shifting intelligence requirements as geographic operating areas change and by making maximum use of battlegroup/force intelligence coordination nets rather than requesting duplicative support from nonorganic systems for every unit in an operation unless it is absolutely essential.

Commander's Ability to Use Intelligence

The commander who understands his intelligence resources, their capabilities and their limitations will be better able to use the intelligence system to operational advantage. The "green door" has been an overused excuse for failure both to teach operators about intelligence and to include intelligence personnel in operations. The door needs to open in both directions.

Commanders need to learn about capabilities and limitations of their intelligence resources. This is not to say that every commander at every level needs to be an intelligence expert. That is neither possible nor is it desirable, but the commander requires sufficient understanding of the intelligence process and system to ask the probing questions which ensure the integrity of the link between his intelligence and operations staffs. Just as operators are taught throughout their careers about the logistics, communications, legal and personnel systems which support them, they need to learn about the intelligence system which supports them. This is a professional development issue which should be part of a gradual process.

One cannot reasonably expect a commander to instantaneously acquire the knowledge he needs to ask his intelligence staff the right questions when he becomes a commander. The knowledge base must develop and build gradually along with all other professional knowledge. Schools for operators at progressive levels should include intelligence modules, tailored by need-to-know and by the nature of the intelligence to which the operator would be exposed, so that commanders are grown understanding intelligence and treating it as a tool for them rather than as magic from behind the green door.

Source Protection

This is an issue largely applicable to national sources that is generally outside the commander's control. Still, it is a matter to consider in planning. The intelligence staff may be able to identify source protection and data dissemination issues early in the planning process and may be able to work around them. In some instances, authorization may be granted to indoctrinate operational personnel to a sensitive source control program if the need to do so is anticipated and requested. Alternatively, cover and sanitization schemes can be developed when source disclosure is not authorized. In this way, operators can get the intelligence information without necessarily knowing its origin. Finally, guidelines may be developed for acting upon data from sensitive sources in advance, so that initiative is not lost in the midst of an operation due to lack of corroborating information from permissible sources.

Ambiguity

Intelligence is no less ambiguous today than it was in 1941. The multiplicity of sources of information that are available today intensifies the situation. Despite the technological sophistication of modern intelligence collection and processing systems, intelligence remains an opinion regarding an opponent's options rather than fact. The modern commander can reduce the affect of, if not totally eliminate, many of the problems Freyberg faced on Crete through proper planning, staffing and coordination. Ambiguity or gaps in the information itself cannot be eliminated; only recognized and factored into the commander's assessments and decisions.

Conclusions

Technology has significantly enhanced the systems which collect and produce intelligence, but the linkages between the existence of intelligence and its operational utility are largely human and will likely remain so. The tasks inherent in providing for continuously available intelligence, in optimizing communication capabilities, in learning to use intelligence effectively, in foreseeing source protection problems and in factoring ambiguity into operational analysis and decision-making are tasks which may be performed only by people. The Battle for Crete demonstrates that commander's skill in addressing these issues is what will determine the success of the link between intelligence and operations. The lessons are as important today as they were in 1941.

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